REMARKS

This is a full and timely response to the non-final Official Action mailed **June 13, 2007**. Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

Claim Status:

Under the imposition of a previous Restriction Requirement, claims 6, 8-23, 30, 31, 48-53 and 56 were withdrawn from consideration. To expedite the prosecution of this application, withdrawn claims 17-23 and 51-53 are cancelled by the present paper without prejudice or disclaimer. Applicant reserves the right to file any number of continuation or divisional applications to the withdrawn claims or to any other subject matter described in the present application.

Withdrawn claims 6, 8-16, 30, 31, 48-50 and 56 remain in the application and are marked "withdrawn." Applicant will be entitled to rejoinder of these claims upon allowance of the corresponding independent claims. MPEP § 821.04.

By the forgoing amendment, various claims have been amended. Additionally, new claims 57-62 have been added. Thus, claims 1-5, 7, 24-29, 32-47, 54, 55 and 57-62 are currently pending for further action.

Objection to Specification:

The recent Office Action objected to claim 34 for including a recitation allegedly lacking sufficient antecedent basis. In response, the dependency of claim 34 has been amended herein. Therefore, following entry of this amendment, the objection to claim 34 should be reconsidered and withdrawn.

Prior Art:

Claims 1-5, 7, 24-29, 32, 35, 36, 39, 41, 43-47, 54 and 55 were rejected as being anticipated under 35 U.S.C. § 102(b) by U.S. Patent App. Pub. No. 2002/0106862 to Jordan et al. ("Jordan"). For at least the following reasons, this rejection is respectfully traversed.

Claim 1 recites:

> A package for a micro-electromechanical device (MEMS package), comprising:
> an inner enclosure having an inner cavity defined therein; and
> *a fill port channel* communicating with said inner cavity and of sufficient length to allow a quantity of adhesive to enter said fill port channel while preventing said adhesive from entering said inner cavity.

(Emphasis added).

Applicant notes the definition of a "fill port" given in Applicant's specification. "A "fill port" is meant to be understood as any opening in a MEMS package that may be used to evacuate the MEMS package of, or fill the MEMS package with, a fluid (liquid or gas)." (Applicant's specification, paragraph 0021).

In contrast, Jordan fails to teach or suggest the claimed package for a MEMs device that includes a fill port channel as disclosed and claimed by the Applicant. In connection with the claimed fill port channel, the Office Action refers to element (34) of Jordan. (Action of 6/13/07, p. 3). However, element (34) of Jordan is a trench in a capping wafer, not a fill port that can be used to evacuate or fill a MEMS package with a fluid. (Applicant's specification, paragraph 0021). Jordan does not teach or suggest a MEMS package that is meant to be evacuated or filled.

Rather, Jordan teaches that "a glass frit paste is screen printed on the bonding surface 28 of the capping wafer 14 so that the paste defines a continuous bond line between the edge 32 and trench 34 of the capping wafer 14." (Jordan, paragraph 0019).

> After the glass bonding material has resolidified, the capping and device wafers 12 and 14 are aligned and mated so that the bonding material on the capping wafer 14 contacts the bonding surface 26 of the device wafer 12. The wafers 12 and 14 are then heated to a temperature sufficient to remelt the glass material but not the filler material of the bonding material, e.g., about 420° C., during which time force is applied to the wafers 12 and 14 to cause a portion of the material to flow into the trench 34 of the capping wafer 14, and simultaneously a second portion of the material flows beyond the peripheral edge 34. The remainder of the glass bonding material remains between the bonding surfaces 26 and 28 of the wafers 12 and 14. ... Finally, the wafers 12 and 14 are cooled to resolidify the bonding material and form the glass bond line 30 shown between the wafers 12 and 14 in FIG. 1.

(Jordan, paragraph 0020).

Consequently, Fig. 1 of Jordan merely shows two wafers (14 and 12) that have been bonded together with a molten glass bond (30). Trench (34) receives "a portion" of the glass bonding material when it is molten. However, trench (34) does not ever provide a fill port channel through which a MEMS package can be evacuated or filled with a fluid. (Applicant's specification, paragraph 0021).

Therefore, Jordan does not teach or suggest "a fill port channel" as defined and claimed by the Applicant. Jordan further does not teach or suggest "a fill port channel communicating with said inner cavity and of sufficient length to allow a quantity of adhesive to enter said fill port channel while preventing said adhesive from entering said inner cavity."

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 1 and its dependent claims should be reconsidered and withdrawn.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. For example, claim 3 recites "a flow control structure extending at least partially into said fill port channel and wherein said flow control structure prevents said adhesive from entering said cavity by physically obstructing a portion of said fill port channel." In contrast, as demonstrated above, Jordan does not teach or suggest an adhesive that flows in a fill port channel. Consequently, Jordan does not teach or suggest a flow control structure in a fill port channel that "prevents said adhesive from entering said cavity by physically obstructing a portion of said fill port channel."

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 3 and its dependent claims should be reconsidered and withdrawn.

Independent claim 24 recites:

> A package for a micro-electromechanical device (MEMS device), comprising:
> an inner enclosure having an inner cavity defined therein;
> *a fill port channel* coupling said inner cavity to an atmosphere; and
> *flow control structure* extending at least partially into said inner enclosure and being configured to control the flow of fluid into said inner cavity.

(Emphasis added).

In contrast, as demonstrated above, Jordan does not teach or suggest a package for a MEMS device that includes a fill port channel, as defined and claimed by Applicant. Jordan does not teach or suggest a fluid in an inner cavity of a MEMs package and, consequently, would not teach or suggest a flow control structure "configured to control the flow of fluid into said inner cavity."

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 24 and its dependent claims should be reconsidered and withdrawn.

Independent claim 32 now recites:

> A micro-electromechanical (MEMS) assembly, comprising:
> a MEMS device disposed at least partially within a package;
> said package including an inner enclosure having an inner cavity defined therein, and a fill port channel coupling said inner cavity to an atmosphere and physically separating said atmosphere and said inner cavity by a distance sufficient to allow a variable flow of adhesive to enter said fill port channel while preventing said adhesive from entering said inner cavity;
> an adhesive seal coupled to said fill port channel; and
> *a diaphragm disposed in said inner cavity for changing a volume of said inner cavity so as to draw a quantity of said adhesive seal through said fill port channel.*

(Emphasis added).

Support for the amendment to claim 32 can be found in Applicant's originally-filed specification at, for example, paragraph 0047. In contrast, Jordan does not teach or suggest the claimed assembly with "a diaphragm disposed in said inner cavity for changing a volume of said inner cavity so as to draw a quantity of said adhesive seal through said fill port channel."

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 32 and its dependent claims should be reconsidered and withdrawn.

Independent claim 43 recites:

> A method of forming a package for a micro-electromechanical device (MEMS device), comprising:
> forming an inner enclosure having an inner cavity defined therein; [[and]]
> forming a fill port channel, wherein said fill port channel is in fluid communication with an atmosphere and said inner cavity and is of sufficient length to allow a variable flow of adhesive to enter said fill port channel while preventing said adhesive from entering said inner cavity; and.
> *flowing a quantity of said adhesive through a fill port of said fill port channel and into said fill port channel.*

(Emphasis added).

Support for the amendment to claim 43 can be found in Applicant's originally-filed specification at, for example, paragraph 0029. In contrast, Jordan does not teach or suggest the claimed method of forming a package for a MEMS device including "flowing a quantity of said adhesive through a fill port of said fill port channel and into said fill port channel." Rather, Jordan teaches a frit glass seal that is disposed as a paste and then melted and cooled to bond two separate wafers together. This is completely unrelated to Applicant's claimed method.

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 43 and its dependent claims should be reconsidered and withdrawn.

Independent claim 54 now recites:

> A MEMS package, comprising:
> means for containing a MEMS device;
> a fluid with said MEMS device in said means for containing said MEMs device;
> means for introducing said fluid into an interior cavity of said means for containing said MEMS device;

an adhesive flowed into said means for introducing said fluid; and
means for controlling a flow of said adhesive through said means for introducing said fluid to as to prevent said adhesive from entering said interior cavity.

Support for the amendment to claim 54 can be found in Applicant's originally-filed specification at, for example, paragraphs 0029-31. In contrast, as demonstrated herein Jordan does not teach or suggest the claimed MEMs package including a fluid within a means for containing a MEMS device, "an adhesive flowed into said means for introducing said fluid; [or a] means for controlling a flow of said adhesive through said means for introducing said fluid to as to prevent said adhesive from entering said interior cavity."

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. For at least these reasons, the rejection based on Jordan of claim 54 and its dependent claims should be reconsidered and withdrawn.

Claims 33 and 34 were rejected under 35 U.S.C. § 103(a) over the combined teachings of Jordan and U.S. Patent No. 6,858,466 to Bower et al. ("Bower"). This rejection fails under 35 U.S.C. § 103(c).

35 U.S.C. § 103(c) states:

> Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Applicant notes that Bower is available as prior art against the present application only under 35 U.S.C. § 102(e). Bower was issued Feb. 22, 2005 on an application filed Nov.

3, 2003. The present application was filed a year before the issuance of Bower on Feb. 9, 2004.

Applicant also notes that Bower is assigned to the Hewlett-Packard Development Co., L.P., as indicated on the cover sheet of the issued patent. Similarly, the present application is also assigned to the Hewlett-Packard Development Co., L.P. (*See*, recorded assignment at reel/frame 015115/0848). Applicant hereby states that the subject matter of the present application and the Bower reference were, at the time the invention of the present application was made, owned by, or subject to an obligation of assignment to, the same person, i.e., Hewlett-Packard Co. (*See* MPEP § 706.02(l)(2)).

Consequently, under 35 U.S.C. § 103(c), the Bower reference *cannot* be applied as prior art against the present application under 35 U.S.C. § 103(a). Therefore, the listed rejections of claims 33 and 34, which apply Bower under § 103(a), must be reconsidered and withdrawn.

Claims 37, 38, 40 and 42 were rejected under 35 U.S.C. § 103(a) over the teachings of Jordan taken alone. This rejection is respectfully traversed for at least the same reasons given above in favor of the patentability of claim 32.

Conclusion:

The newly added claims are thought to be patentable over the prior art of record for at least the same reasons given above with respect to the original independent claims. Therefore, examination and allowance of the newly added claims is respectfully requested.

In view of the following arguments, all claims are believed to be in condition for allowance over the prior art of record. Therefore, this response is believed to be a complete

response to the Office Action. However, Applicants reserve the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

If the Examiner has any comments or suggestions which could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

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